

In the claims:

1. (currently amended) A method of treating a stenosis or restenosis in a coronary blood vessel characterized by a proximal end nearest the origination of blood flow from the heart and a distal end, said method comprising the steps of:

implanting a stent at a first location within the coronary blood vessel; and

injecting a therapeutic agent comprising an anti-restenosis agent into the myocardium proximate the coronary blood vessel at a second location, where the second location is distal, in relation to the coronary blood vessel, to the first location ~~at a site distal to the stent.~~

2. (original) The method of claim 1 further comprising the steps of:

injecting the therapeutic agent into the myocardium from an endocardial space of the heart.

3. (original) The method of claim 1 further comprising the steps of:

injecting the therapeutic agent peri-adventitially through the blood vessel wall.

4. (original) The method of claim 1 further comprising the step of:

injecting the therapeutic agent peri-adventitially through a coronary vein or coronary sinus.

5. (canceled)

6. (original) The method of claim 1, 2, 3 or 4 further comprising the steps of:

selecting the anti-restenosis agent from the group comprising anti-oxidant drugs, anti-inflammatory drugs, anti-neoplastic agents, anti-angiogenic agents and gene therapy agents.

7. (original) The method of claim 1, 2, 3 or 4 further comprising the step of:

providing the therapeutic agent in a time release formulation.

8. (original) The method of claim 1, 2, 3 or 4 further comprising the step of:

providing the therapeutic agent in a microsphere formulation.

9. (original) The method of claim 1, 2, 3 or 4 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in micelles.

10. (original) The method of claim 1, 2, 3 or 4 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in liposomes.

11. (currently amended) A method of treating a stenosis or restenosis in a coronary blood vessel characterized by a

proximal end nearest the origination of blood flow from the heart and a distal end, said method comprising the steps of:

performing an angioplasty procedure at a first location within the coronary blood vessel; and

injecting a therapeutic agent comprising an anti-restenosis agent into the myocardium proximate the coronary blood vessel at a second location , where the second location is distal, in relation to the coronary blood vessel, to the first location ~~at a site distal to the site of angioplasty.~~

12. (original) The method of claim 11 further comprising the steps of:

injecting the therapeutic agent into the myocardium from an endocardial space of the heart.

13. (original) The method of claim 11 further comprising the steps of:

injecting the therapeutic agent peri-adventitially through the blood vessel wall.

14. (original) The method of claim 11 further comprising the step of:

injecting the therapeutic agent peri-adventitially through a coronary vein or coronary sinus.

15. (canceled)

16. (original) The method of claim 11, 12, 13 or 14 further comprising the steps of:

selecting the anti-restenosis agent from the group comprising anti-oxidant drugs, anti-inflammatory drugs, anti-neoplastic agents, anti-angiogenic agents and gene therapy agents.

17. (original) The method of claim 11, 12, 13 or 14 further comprising the step of:

providing the therapeutic agent in a time release formulation.

18. (original) The method of claim 11, 12, 13 or 14 further comprising the step of:

providing the therapeutic agent in a microsphere formulation.

19. (original) The method of claim 11, 12, 13 or 14 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in micelles.

20. (original) The method of claim 11, 12, 13 or 14 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in liposomes.

21. (currently amended) A method of treating a segment of a coronary blood vessel, the segment characterized by a proximal end nearest the origination of blood flow from the heart and a distal end, said method comprising the steps of:

injecting a therapeutic agent comprising an anti-restenosis agent into the myocardium proximate the coronary blood vessel at a site distal, to the segment to be treated.

22. (original) The method of claim 21 further comprising the steps of:

injecting the therapeutic agent into the myocardium from an endocardial space of the heart.

23. (original) The method of claim 21 further comprising the steps of:

injecting the therapeutic agent peri-adventitially through the blood vessel wall.

24. (original) The method of claim 21 further comprising the step of:

injecting the therapeutic agent peri-adventitially through a coronary vein or coronary sinus.

25. (canceled)

26. (original) The method of claim 21, 22, 23 or 24 further comprising the steps of:

selecting the anti-restenosis agent from the group comprising anti-oxidant drugs, anti-inflammatory drugs, anti-neoplastic agents, anti-angiogenic agents and gene therapy agents.

27. (original) The method of claim 21, 22, 23 or 24 further comprising the step of:

providing the therapeutic agent in a time release formulation.

28. (original) The method of claim 21, 22, 23 or 24 further comprising the step of:

providing the therapeutic agent in a microsphere formulation.

29. (original) The method of claim 21, 22, 23 or 24 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in micelles.

30. (original) The method of claim 21, 22, 23 or 24 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in liposomes.

31. (currently amended) A method of treating a segment of a coronary blood vessel characterized by an intraluminal disease, the segment further characterized by a proximal end nearest the origination of blood flow from the heart and a distal end, said method comprising the steps of:

injecting a therapeutic agent into the myocardium proximate the coronary blood vessel at a site distal, to the segment to be treated.

32. (original) The method of claim 31 further comprising the steps of:

injecting the therapeutic agent into the myocardium from an endocardial space of the heart.

33. (original) The method of claim 31 further comprising the steps of:

injecting the therapeutic agent peri-adventitially through the blood vessel wall.

34. (original) The method of claim 31 further comprising the step of:

injecting the therapeutic agent peri-adventitially through a coronary vein or coronary sinus.

35. (canceled)

36. (original) The method of claim 31, 32, 33 or 34 further comprising the steps of:

selecting the therapeutic agent from the group comprising anti-oxidant drugs, anti-inflammatory drugs, anti-neoplastic agents, anti-angiogenic agents and gene therapy agents.

37. (original) The method of claim 31, 32, 33 or 34 further comprising the step of:

providing the therapeutic agent in a time release formulation.

38. (original) The method of claim 31, 32, 33 or 34 further comprising the step of:

providing the therapeutic agent in a microsphere formulation.

39. (original) The method of claim 31, 32, 33 or 34 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in micelles.

40. (original) The method of claim 31, 32, 33 or 34 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in liposomes.

41. (currently amended) A kit for delivering a therapeutic agent to a patient suffering from vascular disease characterized by a diseased treatment region in a coronary blood vessel, the diseased treatment region characterized by a proximal end nearest the origination of blood flow from the heart and a distal end, said kit comprising:

a catheter having means for introducing a therapeutic agent into in a perivascular space surrounding the blood vessel; and

a dose of therapeutic agent suitable for introduction into the perivascular space surrounding the blood vessel through the catheter;

instructions for use of the catheter according to the following method:

positioning the means for introducing into the perivascular space; and



delivering a dose of the therapeutic agent into the perivascular space near the diseased treatment region at a site distal, to the diseased treatment region.